

REMARKS

Claims 1-22 are currently pending. Claims 1, 20, 21 and 22 are amended.

Reconsideration and allowance of the claims is respectfully requested.

The Applicants would like to thank the Examiner for the indication of the allowable subject matter (of Claims 15-19) made in the outstanding Office Action. The Examiner's prompt indication of the allowability of this subject matter is greatly appreciated.

102 Rejections

Claims 1-3, 5, 6, 11, 12, 20 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sampietro et al. (U.S. Patent No. 6,157,116). Applicants have reviewed the cited reference and respectfully submit that the embodiments of the present invention as are set forth in Claims 1-3, 5, 6, 11, 12, 20 and 21 are neither anticipated nor rendered obvious by Sampietro et al. (U.S. Patent No. 6,157,116).

The Examiner is respectfully directed to independent Claim 1. Claim 1 is reproduced below for the examiner's convenience:

1. (currently amended)A data storage device comprising:
 - a housing;
 - a storage medium;
 - a motor drive for moving the storage medium within the housing;
 - a transducer for accessing the storage medium wherein said transducer produces a waveform within said housing; an actuator for positioning the transducer with respect to the storage medium; and noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise. (emphasis added)

Claims 20 and 21 recite limitations similar to those that distinguish Claim 1. Claims 2, 3, 5, 6, 11 and 12 depend on Claim 1 and set forth additional limitations of the claimed invention.

Sampietro et al. does not anticipate or render obvious a noise reduction system for a disk drive that includes a housing wherein the noise reduction system includes “noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise” within the housing as is set forth in Claim 1. Sampietro et al. only teaches a dissimilar noise cancellation system. In particular, Sampietro et al. teaches a system for eliminating noise that is produced by the vibration of the housing of a hard disk drive. Sampietro et al. teaches the coupling of countervailing vibrations onto the physical structure of the housing of the disk drive using a piezoelectric device as a means of eliminating noise. In contrast, in the Applicants system, noise reduction is effected by the broadcast of a noise reducing waveform within the disk drive housing as is set forth in Claim 1 (Claims 20 and 21 contain similar limitations). The Applicants’ respectfully submit that nowhere in the Sampietro et al. reference is it taught or suggested that noise be reduced in such a manner. Consequently, Sampietro et al. does not anticipate or render obvious the embodiments of the Applicants’ invention as are set forth in Claims 1, 20 and 21.

Therefore, Applicants respectfully submit that Claims 1, 20 and 21 overcome the basis for their rejection under 35 U.S.C. 103(a). Accordingly, Applicants submit that Claims 1, 20 and 21 are in condition for allowance. In addition, Sampietro et al. does not anticipate or render obvious the embodiments of the present invention as are set forth in Claims 2-3, 5, 6, 11 and 12 which depend from independent Claims 1. Moreover, Claims 2-3, 5, 6, 11 and 12 are likewise in condition for allowance as being dependent on an allowable base claim.

103 Rejection

Claims 4, 7, 8 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sampietro et al. (U.S. Patent No. 6,157,116) in view of Eatwell et al. (U.S. Patent No. 5,828,768). Applicants have reviewed the cited reference and respectfully submit that the embodiments of the present invention as are recited in Claims 4, 7, 8 and 22 are neither anticipated nor rendered obvious by Sampietro et al. in view of Eatwell et al.

The Examiner is respectfully directed to independent Claim 1 (from which Claims 4, 7, 8 and 22 depend). Claim 1 is reproduced below for the examiner's convenience:

1. (currently amended) A data storage device comprising:
a housing;
a storage medium;
a motor drive for moving the storage medium within the housing;
a transducer for accessing the storage medium wherein said transducer broadcasts a waveform within said housing; an actuator for positioning the transducer with respect to the storage medium; and noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise. (emphasis added)

Claim 22 recites limitations similar to those that distinguish Claim 1. Claims 4, 7 and 8 depend on Claim 1 and recite additional limitations of the claimed invention.

Sampietro et al. does not anticipate or render obvious a noise reduction system for a disk drive that has a housing wherein the noise reduction system includes “noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise” within the housing as is set forth in Claim 1. Sampietro et al. only teaches a dissimilar noise cancellation system. In particular, Sampietro et al. teaches a system for eliminating noise that is produced through structural

vibration of the housing of a disk drive and provides for the coupling of countervailing vibrations onto the physical structure of the housing of the disk drive using a piezoelectric device. In contrast, in the Applicants system, noise reduction is effected by the broadcast of a noise reducing waveform within the disk drive housing as is set forth in Claim 1 (Claim 21 contains similar limitations). The Applicants' respectfully submit that nowhere in the Sampietro et al. reference is it taught or suggested that noise be reduced in such a manner. Consequently, Sampietro et al. does not anticipate or render obvious the embodiments of the Applicants' invention as are set forth in Claims 1 and 21.

Eatwell et al. does not teach or suggest a modification of Sampietro et al. that would remedy the deficiencies of Sampietro et al. outlined above. More specifically, the cited combination of Sampietro et al. and Eatwell et al. does not anticipate or render obvious a system for reducing noise in a hard disk drive that has a housing where the noise reduction system includes "noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise" within the housing as is set forth in Claims 1 (from which Claims 4, 7 and 8 depend) and 22. In contrast, Eatwell et al. only shows a multi-media personal computer that includes a dissimilar active noise reduction system. In the Eatwell et al. system a microphone picks up a sound that is produced by a speaker but does not produce a waveform from acoustic noise from which a noise reducing waveform is generated and broadcast as is set forth in Claims 1 and 22. As such, even if Sampietro et al. and Eatwell et al. are combined as is suggested in the outstanding Office Action the embodiments of Applicants' invention as are set forth in Claims 1 and 22 would not be taught or suggested. Consequently, Sampietro et al. and Eatwell et al. either alone or in combination do not anticipate or render obvious the embodiments of the Applicants' invention as are set forth in Claims 1 (from which Claims 4, 7 and 8 depend) and 22.

Therefore, Applicants respectfully submit that Claims 1 and 22 overcome the basis for their rejection under 35 U.S.C. 103(a). Accordingly, Applicants submit that Claims 1 and 22 are in condition for allowance. In addition, Sampietro et al. in view of Eatwell et al. does not anticipate or render obvious the embodiments of the present invention as are recited in Claims 4, 7 and 8, as these Claims are dependent upon allowable Claim 1.

Claims 9, 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sampietro et al. in view of McLean. McLean does not teach or suggest a modification of Sampietro et al. that would remedy the deficiencies of Sampietro et al. that are outlined above. More specifically, the cited combination of Sampietro et al. and McLean does not anticipate or render obvious a system for reducing noise in a hard disk drive that includes “noise reduction means integrated within the housing for actively reducing acoustic noise by broadcasting a noise reducing waveform that is generated from said noise” within the housing as is set forth in the Claim 1 from which Claims 9, 10, 13 and 14 depend. It should be appreciated that McLean only shows a system for offline control of automotive noise. It is important to note that in McLean noise reducing waveforms are pre-stored cancellation waveforms and are not generated from the noise that they are intended to reduce as is required to meet the limitations of the claims. As such, even if Sampietro et al. and McLean are combined as is suggested in the outstanding Office Action the embodiments of Applicants’ invention as are set forth in Claims 1 and 22 would not be taught or suggested. Consequently, Sampietro et al. and McLean either alone or in combination do not anticipate or render obvious the embodiments of the Applicants’ invention as are set forth in Claims 9, 10, 13 and 14.

Conclusion

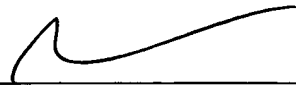
In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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